

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 61018838  
PUBLICATION DATE : 27-01-86

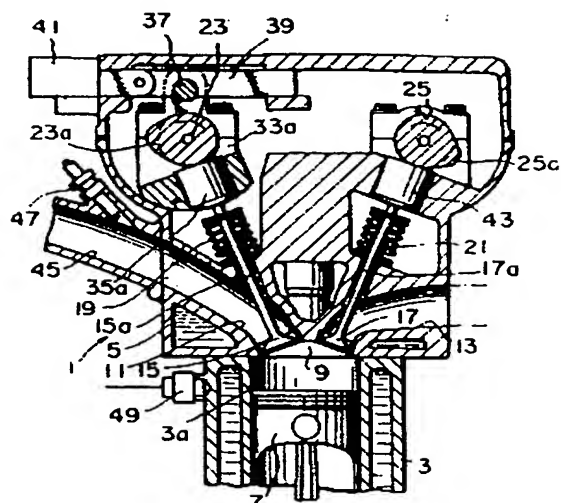
APPLICATION DATE : 06-07-84  
APPLICATION NUMBER : 59140048

APPLICANT : MAZDA MOTOR CORP;

INVENTOR : KASHIYAMA KENJI;

INT.CL. : G01M 15/00 F02P 5/155 G01H 17/00  
// G01L 23/22

TITLE : APPARATUS FOR DETECTING  
KNOCKING OF ENGINE



3a : 3a  
9 : 9  
11 : 11  
23 : 23  
23a : 23a  
33a : 33a  
35a : 35a  
41 : 41  
49 : 49

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ABSTRACT : PURPOSE: To secure a sufficient signal sampling period without generating erroneous operation by valve closing vibration, by changing the end of the period performing the intake of the output of a vibration detector corresponding to the change in the valve closing timing of a valve apparatus taking variable valve closing timing.

CONSTITUTION: The opening and closing timing of a suction valve 15 is controlled so as to be delayed corresponding to the increase in the speed of an engine and detected from the position of an operation rod 39 or the positions of revolving members 33a, 33b. The output of the vibration detector 49 of the engine is sampled for a predetermined period on and after the point of ignition time to judge the knocking state of the engine. At this time, the end of a sampling performing period is changed corresponding to the change in the valve closing timing of the valve apparatus 15 to prevent the a knocking judging means from receiving the effect of the vibration by the valve closing of the valve apparatus.

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